

GREAT STEP FOR WIRELESS SYSTEM

Peter Cooper Hewitt's Discovery May Enable Marconi Soon to Fulfill His Promise.

TWO PHENOMENA DISCOVERED.

Resistance of Mercury Vapor to the Passage of Electric Current Disappears When Certain Potential is Attained.

REPUBLIC SPECIAL.

New York, Feb. 21.—Those interested in the application of wireless electricity to commercial purposes were disappointed today by the invention of Peter Cooper Hewitt. Experts declared that the interrupter invented by Mr. Hewitt would place in the hands of the owners of wireless telegraph systems an instrument which would insure greater accuracy and rapidity of transmission and make possible the use of such powerful currents that the intention of Marconi of sending messages by means of a wireless message would be the sooner realized.

The invention consists of a glass globe about 10 inches in diameter, to the base of which are sealed two tubes containing mercury. It makes possible very powerful rapid and continuous currents to be set up in the antenna, or sending mast, and renders it easy to send messages over great distances and with some degree of secrecy. The operation of this device depends upon two new phenomena in physics, discovered by Mr. Hewitt. These are the resistance of the mercury to the passage of a current until a high potential has been applied and the disappearance of this resistance when the proper voltage is reached. The result of this is that violent and rapid current impulses are set up in the circuit containing the condenser, and so in the sending wire.

Mr. Hewitt, in his laboratory in the Madison Square Garden, said today that he did not pose as a second Marconi and that he pretended to teach the use of wireless telegraphy as that which was possessed by the Italian inventor.

GREAT DISCOVERY OVERCOME. "All I have done," said he, "is to perfect a device by means of which messages can be sent rapidly and without the loss of current occasioned by the spark gap. In wireless telegraphy the trouble has been that it was difficult to keep the sending and receiving instruments adjusted. By the use of my interrupter this is easily accomplished."

"When the spark-gap system is employed there is constant waste, for electricity stored in condensers is made to pass between two balls of highly polished metal. The overheating of these metal balls, their corrosion, the air in the air gap, and other causes interfere with the use of the current and as a result the instruments are often out of harmony."

"The interrupter which I have invented has none of these defects. What practical application of it will be made, I do not as yet know. I hope that Mr. Marconi will use it. I have been asked if it is possible to send currents of great power through the air, why it would not be practicable to transmit power in the same way. If power were sent in that manner, a man who invented a system of sending it by wire would be hailed as a benefactor."

"Power must be sent in a way where it is wanted. While it is true that by changing the number of oscillations it will be possible to insure secrecy, it will be possible to do so by other means. I do not regard secrecy of prime importance. Few persons who take the trouble to find out what is passing through the air, find it not in the least interesting. Besides, there is no loss in telegraphing by means of a secret key. Messages are intended for only one person, but the sender, as a general thing, does not care how many persons may read them. It is essential that wireless telegraphy should have an accurate means of transmitting messages."

At the office of the Marconi Wireless Telegraph Company it was said today that the matter seemed to be of great importance, and that a copy of the Electric Review, which the inventor had sent to the company, had been sent to the engineer in charge, who is now making experiments on Long Island Sound. It was said in England, by the way of the discovery.

1,000,000 A SECOND. The interrupter invented by Mr. Hewitt is capable of developing 1,000,000 oscillations a second, and it may start such a disturbance in the atmosphere as to interfere with the purposes of wireless telegraphy that all other currents could be counteracted or destroyed.

In the war between the wireless telegraph companies of the future, it might be possible for the company having the most powerful apparatus to interfere with the sending of all messages in the neighborhood. It should be necessary to prevent other persons from reading a message in transit, a complex cipher can be made by changing the oscillations in accordance with a code arranged before sending the messages.

It would, of course, be possible for the interceptors to tune their instruments with the oscillations of the sending instrument, but it would be difficult to establish the oscillations may be kept up with a few cells, in the laboratory, and the use of a few cells of creating electrical waves, or in other words, Mr. Hewitt has applied his own discovery.

OUR EXPORTS AND IMPORTS. January One of the Biggest Months in Nation's History.

Washington, Feb. 21.—The export figures furnished by the Treasury Bureau of Statistics continue to indicate that the foreign commerce of the United States is resuming its normal conditions. The January exports were larger than those of any preceding month in the history of our country, except those of the year 1901, in which the January figures were about \$2,000,000 above those of last month.

The total value of exports in January, 1903, was \$25,040,000, against \$23,120,000 in January, 1902, and \$21,620,000 in January, 1901. The total value of imports in January, 1903, was \$24,040,000, against \$22,120,000 in January, 1902, and \$20,620,000 in January, 1901.

Turning to the import side, last month's figures show the largest January imports in the history of our commerce. The total imports in the month of January, 1903, were \$24,040,000, against \$22,120,000 in January, 1902, and \$20,620,000 in January, 1901.

For the twelve months ending with January, 1903, the total imports approximate the billion-dollar line, being \$253,837,000, against \$243,000,000 in January, 1902, and \$228,000,000 in January, 1901. Manufacturers ready for consumption also show a material increase, being in the calendar year 1902, \$184,782,228, against \$128,775,825 in 1901, and \$120,438,965 in 1900.

ELK ATE A TEAMSTER'S HAY. Animals Are Said to Be Numerous in the Adirondacks.

REPUBLIC SPECIAL. Tupper Lake, N. Y., Feb. 21.—A teamster on the freight line from Long Lake to Little Tupper Lake reports the presence of a large herd of elk near the latter lake. He was frightened a load of hay to the little Tupper and stopped over night at a hotel near by. In the morning twenty-three head of elk were seen around the hay, and a large quantity of it had been eaten.

The elk are undoubtedly a part of the herd which William C. Whitney has placed in the Adirondacks, and which have been seen in various parts of the woods during the winter.

Cloth Department.

(FIRST FLOOR, MAIN STORE.)

New heavy cotton and linen suitings are ready for selection. 150 pieces Barr's new Knickerbocker Crash Suitings in 15 different shades at 25c per yard. 125 pieces—new this season—Showplace Crash Suitings for separate skirts and shirt waist suits, very pretty; only 25c per yard; see Olive street window. Even finer and more stylish Crash Suitings, all the rage for 1903, for 45c per yard.

Plain Linens in all the leading shades for Shirt Waists, 25c per yard.

2,000 yards of Checks, medium weight, Outing Flannel, and light for night-gowns and pajamas, 50c quality, for 65c per yard.

Muslin Underwear.

(SECOND FLOOR, ANNEX.)

Since we moved and while getting settled in our new, bright location, we have found some very choice bargains that got more or less of us or were too small in quantity to hold over. We have reduced prices in all to quickly clear them.

Women's Dressing Squares, in cashmere and French flannel, trimmed with lace and braids; slightly soiled; reduced from \$7.50 and \$9.50 to \$5.00; sizes 32 to 38.

Infants' Cloaks, 1 1/2 to 2 years; trimmed with braid and ribbons, red, green and navy blue; reduced from \$1.50 to 75c.

Infants' Caps—Your choice of several different styles, colors, red, navy, cadet and brown; were \$1.25, \$1.50 and \$1.50, all reduced to 75c.

An odd lot of Infants' Caps, colors brown, green and blue; all sizes; regular price 75c and 50c; special for Monday 25c.

Barr's Cafe.

(FOURTH FLOOR, ANNEX.)

The brightest, lightest and daintiest dining place in St. Louis. Just the place to make up your mind as to what to eat before going to the theater.

Music programme for week of February 21:

March—Sammy, Penn Selection—The Prince of Pilsen, London

"El Lucero," Mexican Dance, Edden Caprice—The Birds and the Brook, Suits

Secret—Your choice of several different styles, colors, red, navy, cadet and brown; were \$1.25, \$1.50 and \$1.50, all reduced to 75c.

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MISSOURI'S GREATEST STORE.

New Things for Early Buyers and Choice Bargains for Wide-Awake Patrons

"Are cheek by jowl" this week. What you save at the bargain counters you'll be glad to invest in the early arrivals, so fascinating you'll find them:

New Spring Suits and Cloaks.

We have never at this early date in the season been able to show such a complete line of New Spring Suits, Coats and Skirts as you will find ready for your inspection now in our great Cloak and Suit Department.

The New Spring Suits

Are here in great profusion and must really be seen to appreciate the many new and beautiful ideas evolved. And the prices asked, when material, style, fit and finish is considered, are so low that you will readily see the advantage of making an early selection. We describe briefly three favorite styles:

At \$13.50—A new Blouse Suit, with short double cape over shoulders, new pouch sleeves, seven-gore skirt, house silk lined, material is Venetian cloth in shades of black, navy, brown and tan, at \$13.50.

At \$18.75—A new Blouse Suit, made with deep peplum and ripple cape—the entire blouse trimmed with piping of black and white silk, full sleeves with fancy cuffs, nine-gore skirt, material is Lymanville serge in black and the new shade of blue, at the popular price of \$18.75.

At \$25.00—A Louis XIV Blouse Suit, trimmed with bands of black and white silk and gun-metal buttons, the revers faced with fancy braid, new seven-gore skirt; the material is a fine quality of cheviot serge in shades of black, blue and gray mixture; a very handsome suit for \$25.00.

\$10 for \$25 Priestley's Cravenette Rain Coats.

We have reduced our great stock of genuine Priestley's Cravenette Rain Coats, in all colors and styles, from \$22.50 and \$25.00 to only **\$10.00**

Clearance of Upholsterings, Bedding and Lace Curtains

At one-half and one-third regular prices. Third floor, Main Store.

To-morrow we put on an extraordinary sale in our Upholstery Department. It is a movement on a gigantic scale, and one that will long be remembered for its unparalleled offerings. Here are a few of the items:

Tapestry Portieres.

One lot of Mercerized Damask Portieres, corded; were \$1.75, \$1.75 and \$1.75; price at \$1.25.

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One lot of Couch Covers, 50 inches wide, 1 yards long, fringe all around, in Oriental effects; worth \$2.50; now \$1.75 each.

We will close out all portieres where we have one pair of a pattern that were \$5.00 to \$10.00 for \$1.75 to \$3.00 pair.

One lot of Portieres, for double doors, all colors; good value at \$1.75; now \$1.25 each.

Lace Curtains.

Savoy Lace Curtains with lace insertion at edge, 3 yards long, on good quality of mesh; worth \$4.00 to \$7.50 pair; now \$2.50 to \$4.00 pair.

Ruffled Net Curtains, with lace insertion at edge, 3 yards long; worth \$1.75; now \$1.25 pair.

All remnants of Repps, Queen's Cord Tapes, and Damask, in lengths from one-half to one and one-half yard; will sell on Monday only at one-half price.

Blankets, Quilts and Feather Pillows.

One lot White Wool Blankets, 10-4 size, borders pink and blue; were \$10.00 pair; now \$6.00 pair.

Imported Marzelles and Cameo Bed Quilts; were \$15.00 to \$25.00; now \$9.00 to \$12.00.

One lot Feather Pillows, 7 lbs. to the pair, good quality ticking; were \$1.50 pair; now \$1.00 pair.

Just arrived, 2,000 Silkline Comforts for Spring, all sizes and colors; \$1.25, \$1.50, \$1.75 and \$2.00; fully worth one-third more.

Tapestry Section.

One lot of Tapestry, 50 inches wide, in desirable patterns; were \$2.50 yard; now \$1.00 yard.

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Household Linens.

Our linen buyer, now in the East, came across some choice lots that he could buy cheaply enough to give housekeepers some genuine bargains. We received them and will place them on sale to-morrow.

25 pieces 2-yard wide Irish double Damask, all new patterns, \$1.25 per yard; napkins to match, \$1.25 dozen.

150 dozen 24x36-inch extra heavy white Linen Napkins, \$3.00 per dozen; special value.

250 pairs union linen Pillow Cases, hemstitched; size 24x36, at 75c per pair, for \$1.00 goods.

Specials for Monday in Barr's Food Department. (Basement Annex.)

20 pounds of Best American Granulated Sugar, 98c in cotton sacks, for

Coffee—a special, good Rio 10c

Coffee—per can 8c

Canned Tomatoes— 8c

Standard Soda—very good 5c

Corn Starch—a very good 5c

Condensed Milk— 12c

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